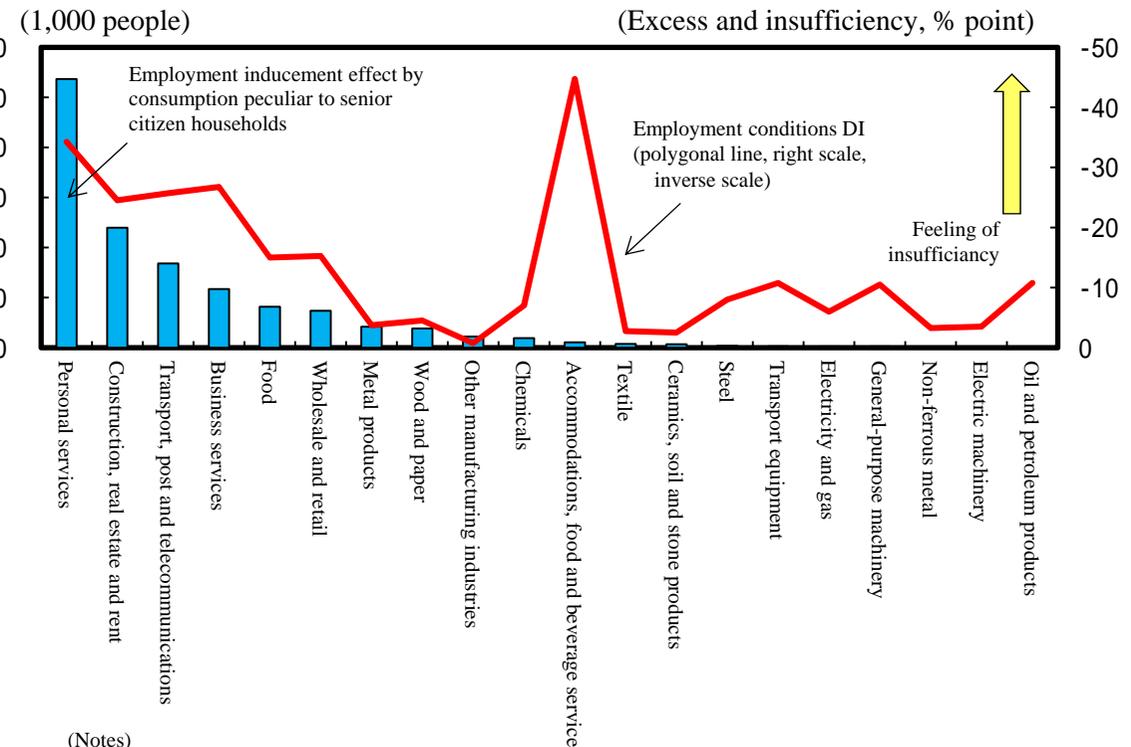- There is a labor shortage in relation to the gradual improvement in business conditions and baby boomers' mandatory retirement age. In particular, unemployment due to mismatching between recruiting and job hunting may be increased.
- There is also a labor shortage in those sectors in which demand is increasing due to population aging and new growth sectors represented by IoT and artificial intelligence (AI). Additionally, promoting a smooth shift of the labor force to such sectors is important by using mid-career recruitment.

Figure 9 UV curve

(Unemployment rate, %)

January 2010
January 2005
January 2000
December 2012
January 1995
March 2016
January 1990
Increasing mismatches
Shrinking mismatches
Worsening supply and demand
Improving supply and demand

(Job vacancy rate, %)

Figure 10 Employment inducement effect by population aging

(1,000 people)   (Excess and insufficiency, % point)

Employment inducement effect by consumption peculiar to senior citizen households

Employment conditions DI (polygonal line, right scale, inverse scale)

Feeling of insufficiancy

Personal services, Construction, real estate and rent, Transport, post and telecommunications, Business services, Food, Wholesale and retail, Metal products, Wood and paper, Other manufacturing industries, Chemicals, Accommodations, food and beverage service, Textile, Ceramics, soil and stone products, Steel, Transport equipment, Electricity and gas, General-purpose machinery, Non-ferrous metal, Electric machinery, Oil and petroleum products

(Notes) 1. Based on the Labour Force Survey, the Ministry of Internal Affairs and Communications, and General Employment Placement Situation, Ministry of Health, Labour and Welfare.

2 Job vacancy rate = (number of available jobs - number of persons who found employment) / (number of available jobs - number of persons who found employment + number of employed persons by non-agricultural industries)

3 Unemployment rate for employees = number of unemployed persons / (number of employed persons by non-agricultural industries + number of unemployed persons)

4 3-month moving average (seasonally adjusted), the Cabinet Office.

(Notes)

1. Based on Input-Output Table (2011), National Survey of Family Income and Expenditure and National Census for 2010, the Ministry of Internal Affairs and Communications and National Short-Term Economic Survey of Enterprises in Japan, Bank of Japan.

2 Employment inducement effect by consumption peculiar to senior citizen households is employment inducement effect when consumption peculiar to senior citizen households increases one trillion JPY in total in ratio to each consumption item. See Appended note 2-1 for estimation method.
Employment inducement effect covers approximately 66,500 workers in other industries such as agriculture, forestry and fishery. General-purpose machinery includes general-purpose, production and industrial machines.

3 Employment conditions DI is mean value in 2015.

- If improvement in labor force participation of elderly people and women job seekersis realized, Japan's total labor supply by man-hours can increase by 2.0%. It is important to spread diverse work styles such as by implementing teleworking, which enables flexible choosing of workplace and work time, and by working on capability development.

Figure 11 Potential manpower

	Man-hours (100 mil. hours)	Growth rate (%)
Labor force participation of women devoted to pregnancy and/or parenting	10.0	0.9
Labor force participation of women devoted to nursing and/or care	1.4	0.1
Labor force participation of elderly people who wish to be employed	11.2	1.0
Total	22.6	2.0

(Notes) 1. Based on Labour Force Survey, the Ministry of Internal Affairs and Communications, Basic Survey on Wage Structure and Monthly Labour Survey, Ministry of Health, Labour and Welfare.

2 Impact on total labor supply all over Japan (regardless of gender) (number of employees × working hours per worker, approx. 110 billion hours/year) was estimated in the case where the labor force participation of women devoted to pregnancy/parenting and nursing/care, and of elderly people who wish to be employed are increased. The labor force participation of women devoted to pregnancy and parenting is the impact in the case where women under 60 who are not involved in job hunting activity but wish to be employed (950,000 women as of 2015) participate in the labor force. The labor force participation of women devoted to nursing and care is the impact in the case where women under 60 who are not involved in job hunting activity but wish to be employed (130,000 women as of 2015) participate in the labor force. The labor force participation of elderly people who wish to be employed is the impact in the case where job seekers or unemployed (1.02 m people as of 2015) among the non-labor population over 60 participate in the labor force.

3 Women and elderly people are assumed to participate in the labor force as part-time workers (annual working hours are approximately 1,050 hours for women and 1,100 hours for elderly people). Annual working hours were calculated from the data on working hours for June reported in Basic Survey on Wage Structure using Basic Survey on Wage Structure and Monthly Labour Survey.
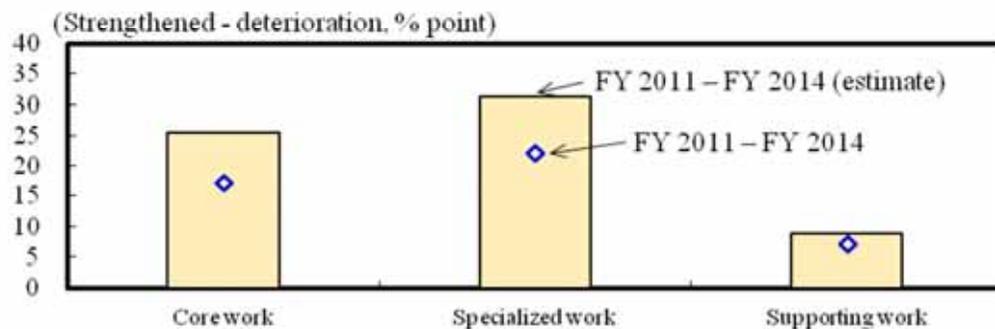
Figure 12 Relationship between percentage of elderly who can choose flexible working hours and their labor participation ratio

(Growth in labor participation ratio for those aged over 65, % point)

(Percentage of elderly who can choose flexible working hours, %)
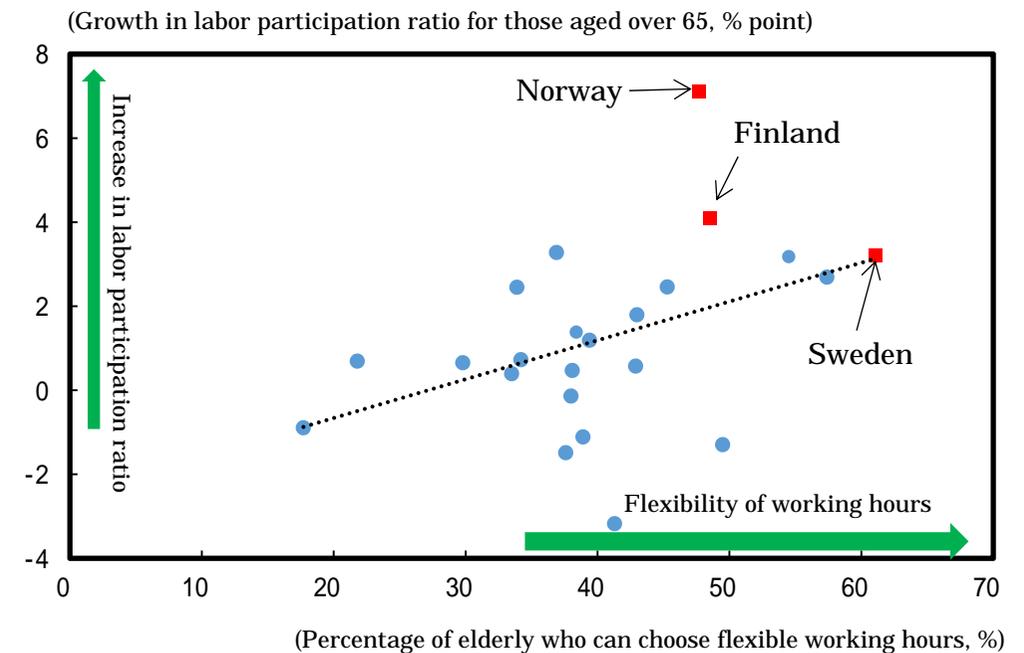
(Notes)
1. Based on OECD.Stat and Fifth European Working Conditions Survey (European Union).

2 Percentage of elderly who can choose flexible working hours is the proportion of workers (aged over 50) who can determine working hours under certain limitations or at their own discretion. Values are as of 2010.

3 Growth in the labor participation ratio for those aged over 65 is the change from 2000 to 2010.

- Under the low birth rate and longevity with limited possibilities to expand the size of the new graduates market, companies are actively making efforts to enhance their stance toward mid-career hiring of trained people related to core or specialized work to secure human resources.
- Compared to other countries, the efficiency of matching the number of unemployed people to employment (percentage that the unemployed lead to employments) is at a low level. Regarding mid-career recruitment, further disclosure of office information and promoting internship after preparing an appropriate environment is considered to contribute to development of the size and function of the job change market.

Figure 13 Companies' stance toward mid-career recruitment

(Strengthened - deterioration, % point)

FY 2011 – FY 2014 (estimate)

FY 2011 – FY 2014

Core work | Specialized work | Supporting work

(Note) Based on Survey on Human Resources of the Company, the Cabinet Office.

Figure 14 Efficiency of human resource matching
(Percentage that the unemployed lead to employments)

(%)

Japan | UK | Germany | Sweden | USA
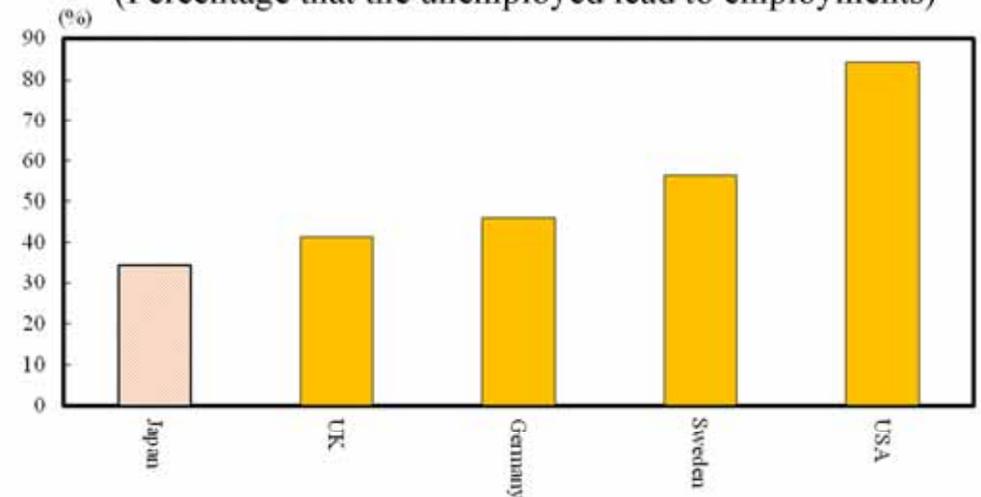
(Notes)1. Compiled based on the Labour Force Survey, the Ministry of Internal Affairs and Communications, Report on Employment Service, Ministry of Health, Labour and Welfare, OECD.Stat, Eurostat and Job Openings and Labor Turnover Survey, BLS.

2   Calculated by OLS estimating of the following matching model which describes new employees with number of available jobs (vacancies) and unemployed.

$$\ln(n_t) = v_1 + v_2 \times \ln(m_{t-1}) + (1 - v_2) \times \ln(u_{t-1}) + \varepsilon_t$$

n_t: New employees
m_t: Number of available jobs
u_t: Number of unemployed
ε_t: Error terms ($\sim N(0, \sigma^2)$)
Estimation period is Q1 of 2008 - Q4 of 2015.

3   Percentage that the unemployed lead to employments for 1 month when number of available jobs and unemployed is equal (number of available jobs / unemployed = 1).

- Long work hours reduce the labor force participation of women and elderly people, and also increase the risk of heart failure among workers and prevent training opportunities outside the company. More than 30% of working women wish to have diverse work styles, such as being a limited regular employee.
- Seniority-based, rigid wages form one of the factors that increase difficulties in mid-career recruitment.

   It is necessary to aim at equal pay for equal work as well as a correction of the wage gap between regular and non-regular workers. Additionally, capability/skill development should be ensured to be reflected in wages by developing a scheme for evaluating skills and abilities. Further, it is necessary to maintain and strengthen opportunities for human-capital investment so as to secure sufficient opportunities for skill development.
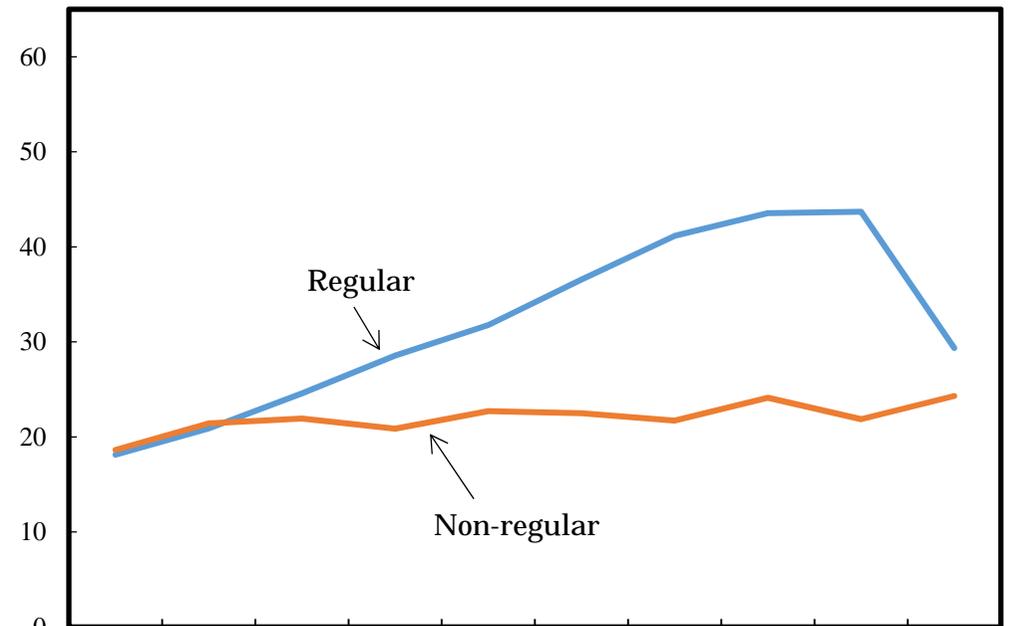
Figure 15 Regular employees' awareness of limited regular employees
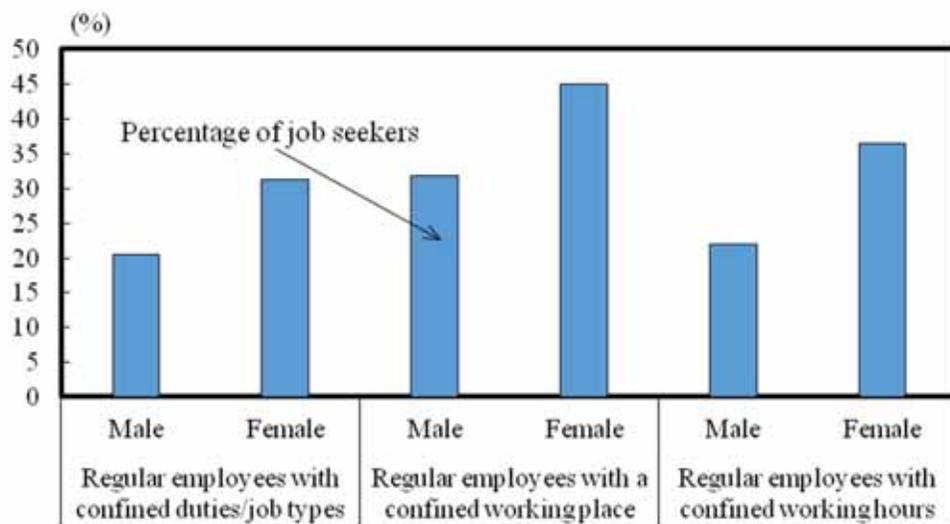
(Note) Based on Report on Part-time workers 2015, Aidem Co., Ltd.

Figure 16 Wage curves of regular/non-regular employees

Manufacturing, large company (over 1,000 employees), male, high school graduates

(Notes)
1. Based on Basic Survey on Wage Structure, Ministry of Health, Labour and Welfare.
2. Wages are scheduled salaries for full-time workers for June 2015.